



XT42000 SERIES

SIZE CODE 5 M27 COTS



+200°C

ELECTRICAL SPECIFICATIONS

- **Operating Temperature:** -40°C to +200°C
- **Storage Temperature:** -45°C to +205°C
- **Temperature Rise:** < 30°C
- **Inductance at rated DC:** ≤ 30% of initial
- **Dielectric Withstanding Voltage:** 100 V_{RMS}
- **Overload Current:** 1.5 times rated current
- **Different electrical values available upon request**

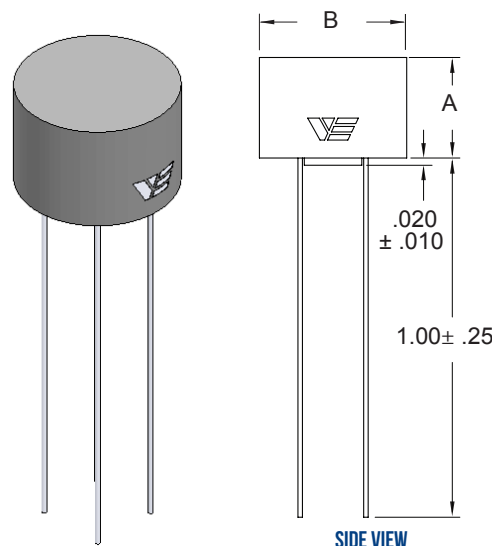
FEATURES

- **Ideal** for geophysical applications in environments ≤ 200°C
- **Compact**, low profile, ideal for automatic placement
- **Terminations:** High temperature solder
- **Welded Internal Connections** - no reflow risk
- **Moisture, Shock and Immersion Resistant**
- **Self-Shielding**
- **Other termination finishes available**

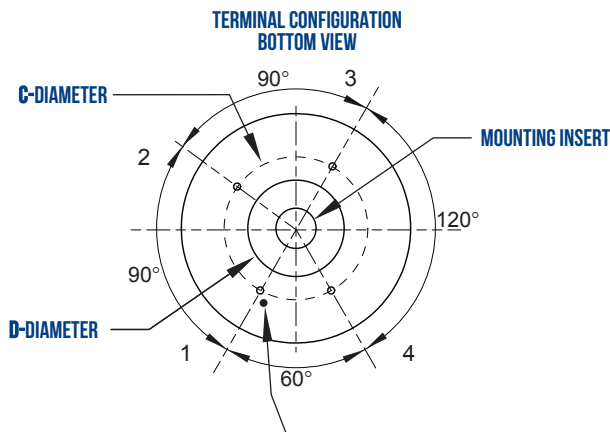
APPLICATIONS

- Filter inductors
- Power supplies
- Ripple suppressors
- DC/DC converters
- Common mode chokes
- SEPIC converters

| Inductance Range (mH) | DCR (Ohms) | Current Rating (Amps) |
|-----------------------|---------------|-----------------------|
| 0.025 to 20 | 0.015 to 10.2 | 0.29 to 7.76 |

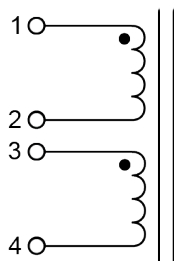


| SIZE CODE | A MAX | B MAX | C ± .010 | D ± .010 | INSERT | TERMINAL DIAMETER |
|-----------|-------|-------|----------|----------|----------------|-------------------|
| 5 (IN) | .635 | .950 | .670 | .570 | .138-32 UNC-2B | .020±.002 |
| 5 (MM) | 16.12 | 24.13 | 17.0 | 14.48 | .200 MIN DEEP | 0.51 |

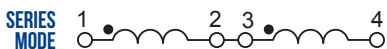


White dot identifies terminal. 1 Terminals are clockwise from pin 1.
MARKINGS: LASER ETCH OR INK

SCHEMATIC



TYPICAL USER CONNECTIONS



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DATA TABLE

| M27/356 Dash No. (For Ref.) | Vanguard Part Number | Series Inductance (mH)* | Series DC Current max (Amps) | Series DCR (Ohms ±25%) | Parallel Inductance (mH) | Parallel DC Current max (Amps) | Parallel DCR (Ohms ±25%) |
|-----------------------------|----------------------|-------------------------|------------------------------|------------------------|--------------------------|--------------------------------|--------------------------|
| -05 | XT42651 | 20 | 0.29 | 10.2 | 5 | 0.58 | 2.55 |
| -10 | XT42656 | 15 | 0.33 | 7.7 | 3.75 | 0.66 | 1.925 |
| -15 | XT42661 | 10 | 0.40 | 5.1 | 2.5 | 0.80 | 1.275 |
| -20 | XT42666 | 7.5 | 0.49 | 3.8 | 1.88 | 0.98 | 0.95 |
| -25 | XT42671 | 5.0 | 0.6 | 2.6 | 1.25 | 1.2 | 0.65 |
| -30 | XT42676 | 3 | 0.78 | 1.5 | 0.75 | 1.56 | .375 |
| -35 | XT42681 | 2 | 0.95 | 1 | 0.5 | 1.9 | 0.25 |
| -40 | XT42686 | 1 | 1.3 | 0.5 | 0.25 | 2.6 | 0.125 |
| -45 | XT42691 | 0.750 | 1.6 | 0.38 | 0.1875 | 3.2 | 0.095 |
| -50 | XT42696 | 0.500 | 1.9 | 0.25 | 0.125 | 3.8 | 0.0625 |
| -55 | XT42701 | 0.250 | 2.7 | 0.13 | 0.0625 | 5.4 | 0.0325 |
| -60 | XT42706 | 0.100 | 3.88 | 0.06 | 0.025 | 7.76 | 0.015 |

Inductance measured at 10 kHz, 0.1 V_{RMS}

*Inductance tolerance +25/-5 %

CUSTOM DESIGNS & MODIFICATIONS:

Other electrical configurations and performance characteristics are available in various sizes and package types

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